UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,538	06/23/2003	Hon Keat W. Chan	3382-64711	1679

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EXAMINER
ANYA, CHARLES E

ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3/* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 June 2003*.

2a)☐ This action is **FINAL**.　　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date *4/5/04*.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-25 are pending in this application.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3.   **Claims 5 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.**

      Claims 5 and 24 including "the method of claim 1 wherein the exchange function is executed in executive mode" and "the method of claim 20 wherein the exchange function is executed in user mode" respectively, is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.   **Claims 1-14 and 20-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

"executing an exchange function comprising **changing a local pointer for a global pointer;** jumping to an address contained in the local pointer wherein, the local pointer points to the exchange function, or the local pointer points to an address accessing a shared resource; and executing the exchange function after accessing the shared resource."

The above highlighted phrase does not clearly and distinctly point out the invention because by "changing a local pointer for a global pointer" the local pointer and the global pointer would be pointing the same resource, which is contrary to Applicant's disclosed invention. For instance, the specification discloses, "…exchanges the local variable with the global variable then jumps to (or calls) the address in the local address (i.e. the address received in the exchange). Since the global variable is initialized with the pointer to the protected resource, the first thread exchanging variables, obtains the pointer to the protected resource. Thus, by jumping to the address pointed to by the local variable, the thread has entered the protected resource" (page 2 lines 10 –17).

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.   Claims 1,3,13,14 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,375,241 to Walsh.

8.   As to claims 1,3,13,14 and 20-22, Walsh teaches a method comprising: executing an exchange function comprising changing a local pointer for a global pointer (Abstract, Old A5 Pointer 40 Col. 8 Ln. 31 – 34, "...stored..." Col. 10 Ln. 6 – 9); jumping to an address contained in the local pointer wherein, the local pointer points to the exchange function, or the local pointer points to an address accessing a shared resource (Step 80 Col. 8 Ln. 21 – 24); and executing the exchange function after accessing the shared resource (Step 86 Col. 8 Ln. 38 – 43).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 2,4,6-12,15-19,23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. U.S. Pat. No. 5,375,241 to Walsh.

11.   As to claims 2,4,8-10 and 23, although Walsh does not explicitly teach the

method of claim 1 wherein the exchange function is method of a class including a

property comprising the global pointer, one of ordinary skill in the art at the time the

invention was made would have known to implement the switch function (selector

routine) of Walsh as a method of a class since object oriented programming is well

known in the art and the benefits of polymorphism, inheritance and encapsulation would

be realized.

12.   As to claim 6, 7,11,12 and 25, although Walsh does not explicitly teach the

method of claim 1 wherein the local variable is associated with a process/thread, Walsh

discloses an interface routine of applications associated with a pointer (Col. 8 Ln. 19 –

21), this covers the limitation since an application is inherently made up of at least one

process and it is obvious to one of ordinary skill in the art that a process includes at

least one thread (function).

13.   As to claims 15,16,18 and 19, Walsh teaches a computer-readable medium

including instructions for performing functions comprising: creating a global variable

initialized with a shared resource access address ("...allocating..." Col. 7 Ln. 61 – 63);

the exchange function, for exchanging a threads local variable with the global variable

(Abstract, Old A5 Pointer 40 Col. 8 Ln. 31 – 34, "...stored..." Col. 10 Ln. 6 – 9); control

flow transferring control to an address contained in a threads local variable; and control

flow for calling the exchange function after accessing the shared resource (Step 80 Col.
8 Ln. 21 – 24).

Walsh does not explicitly teach creating threads including a local variable
initialized with an exchange function address, but since an application inherently
includes at least a thread, the interface routine (application) is initialized to point to the
switching function (selector routine) (Col. 8 Ln. 19 – 21).

14.　As to claim 17, Walsh teaches the computer-readable medium of claim 15
wherein the shared resource is a memory location (Col. 8 Ln. 21 – 24).

Allowable Subject Matter

15.　Claims 1 and 20 would be allowable if rewritten or amended to overcome the
rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. For
instance:

A method comprising:

executing an exchange function by an initial requestor comprising
exchanging a local address contained in a local variable with a global address
contained in a global variable;

jumping to the address of local variable, wherein the local variable points
to the exchange function, or the global address associated with a shared
resource based on the exchange function;

executing the exchange function after accessing the shared resource;

and dynamically repeating the executing and jumping steps by other requestors while the initial requestor is performing one of the steps, in order to synchronize access to the shared resource.

NOTE: claims 2-14 and 21-25 would have to be amended to correlate to the proposed claim.

Examiner believes that the above rewritten claim language better and clearly points out Applicant's invention because the essence of exchanging the local variable with the global variable is have any subsequent requestor to the shared resource be directed to the exchange function thus preventing the subsequent requestor from accessing the shared resource when an initial requestor is still accessing the shared resource. The claims as presently presented do not reflect the disclosed invention and as such the claim as proposed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Anya whose telephone number is (571) 272-3757. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Charles E Anya
Examiner
Art Unit 2194

cea.

LEWIS A. BULLOCK, JR.
PRIMARY EXAMINER